Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of	)	
	)	
Amendment of Section 2.106 of	)	ET Docket No. 95-18
the Commission's Rules to Allocate	)	RM-7927
Spectrum at 2 GHz for Use by the	)	PP-28
Regarding Multiple Address Systems	)	
Mobile-Satellite Service	)	

COMMENTS

The Burlington Northern and Santa Fe Railway Company ("BNSF") and Norfolk Southern Corporation ("NS"), by their attorneys and pursuant to Section 1.415 of the Commission's Rules, hereby jointly submit comments in response to the Further Notice of Proposed Rule Making in the captioned proceeding.[1] For their joint comments, BNSF and NS state as follows:

Procedural Matters

BNSF and NS, like other critical infrastructure industries, are licensees and operators of Fixed Service ("FS") facilities utilizing the 2110-2130 MHz and 2165-2200 MHz bands. As such, they have a continuing interest in the instant proceeding.[2/]

The FNPRM specified a comment submission date 60 days from publication of the FNPRM in the Federal Register, which

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[1] Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service, ET Docket No. 95-18, RM-7927, First Report and Order and Further Notice of Proposed Rule Making, FCC 97-93, 62 Fed. Reg. 19509 (April 22, 1997) ("FNPRM").

[2/] BNSF and NS previously participated in this proceeding through the Association of American Railroads.

publication was effectuated on April 22, 1997. Accordingly, these comments are timely filed.

Background

By the FNPRM, the Commission allocated 70 megahertz of spectrum at 1990-2025 MHz and 2165-2200 MHz to the Mobile-Satellite Service ("MSS"). The relocations necessitated by those allocations will impact on FS licensing and operation.

The 1990-2025 MHz band allocated for MSS uplinks is part of the 1990-2110 MHz band presently utilized by the Broadcast Auxiliary Service ("BAS").[3/] To accomodate this MSS allocation, the FNPRM relocates the BAS band to the 2025-2130 MHz band.[4/] The BAS relocation, in turn, requires the relocation of FS users from positions at 2110-2130 MHz.

The 2165-2200 MHz band allocated for MSS downlinks presently is utilized by FS. The FNPRM provides for sharing of the band by MSS and FS, if feasible. Where sharing proves infeasible, the MSS operators will be allowed to relocate incumbent FS operation to bands above 5 GHz.

The Commission requested comment on the specific relocation requirements and procedures proposed by the NPRM.

[3/] As used by the FNPRM, the acronym "BAS" refers to the Cable Television Relay Service and the Local Television Transmission Service, as well as the Broadcast Auxiliary Service. BNSF and NS adopt the FNPRM's usage in this regard.

[4/] By reducing each of the seven BAS channels from 17 to 15 megahertz, BAS requirements at 2 GHz will be reduced from 120 to 105 megahertz.

Discussion

1990-2025 MHz Relocations

To accomodate the allocation of the 1990-2025 MHz band to MSS, the BAS band is being rechannelized and relocated from 1990-2110 MHz to 2025-2130 MHz. The BAS relocation will intrude into the FS band at 2110-2130 MHz. As the Commission recognizes, "BAS and FS generally cannot share spectrum,"[5/] and therefore, it will be necessary to clear FS licenses from the 2110-2130 MHz band in any geographic area where the BAS band is rechannelized and relocated to accomodate MSS.

The FNPRM raises questions as to (i) whether it would be feasible for any two or three of MSS, BAS and FS to share any bands on a short term or permanent basis, and (ii) whether it is necessary to completely clear FS from the 2110-2130 MHz band before relocated BAS operations can begin in that band.[6/] The FNPRM also proposes that any relocations necessitated by the MSS/BAS relocations be carried out in accordance with the processes specified in the Emerging Technologies proceeding.[7/]

Sharing. BNSF and NS believe it is most unlikely that MSS, BAS and FS could share any band without incurring or causing harmful interference. MSS uplinks will be portable or mobile units transmitting in omni-directional patterns. Electronic news

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[5/] FNPRM, at ¶ 69.

[6/] FNPRM, at ¶ 70.

[7/] FNPRM, at ¶ 70, citing, Emerging Technologies, ET Docket 92-9, 8 FCC Rcd. 6589 at ¶¶ 15-16.

gathering ("ENG") applications are the predominant BAS use of the 1990-2110 MHz band,[8] and, presumably, would be the predominant BAS use of the 2110-2130 MHz band. As recognized by the FNPRM, BAS "must transmit along unengineered paths from unpredictable locations."[9] These uses and characteristics effectively render BAS a "mobile" service from the perspective of frequency use coordination. It is submitted that mixing fixed services and mobile, or essentially mobile, services in the same spectrum band is a recipe for inter-service harmful interference.

Clearing the 2110-2130 MHz Band. For similar reasons, BNSF and NS believe there is but one limited alternative to completely clearing FS from the 2110-2130 MHz band before relocated BAS operations are allowed to begin in that band. Under that limited alternative, the Commission could establish a firm cutoff date by which BAS relocation intentions must be specified. Any FS incumbents impacted by timely specified BAS relocation plans would be entitled to be relocated to equivalent facilities and equipment before the initiation of such BAS operations, and at the expense of the MSS operators.[10] To the extent timely specified BAS relocation plans clearly would not affect an FS incumbent's authorized facilities or operations, those unaffected incumbent facilities and operations would be "grandfathered" and protected from interference

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[8] FNPRM, at para. 5.

[9] FNPRM, at para. 31.

[10] An alternative system such as this must recognize that a limited number of BAS plans may trigger system-wide relocations of FS incumbents.

from all future BAS use of the band.

Relocation of FS Incumbents. For the most part, BNSF and NS agree with the FNPRM that any relocations of FS incumbents from the 2110-2130 MHz band necessitated by MSS/BAS relocations should be effectuated in accordance with the processes specified in the Emerging Technologies proceeding. However, BNSF and NS submit that the voluntary negotiation period should begin on the grant date of MSS authorizations, rather than on the acceptance date of MSS applications. In addition, any "sunset date" for the MSS operators obligation to compensate BAS and FS incumbents for relocation should be the expiration date of the initial MSS licenses. Tying relocation schedules to license dates rather than application dates will allow all parties to evaluate their relocation rights and obligations in light of concrete technical considerations and business schedules, rather than on the basis of artificial schedules.

2165-2200 MHz Relocations

Relocation Schedules. A critical question posed by the FNPRM with regard to the relocation of FS incumbents from the 2165-2200 MHz band goes to the schedule for such relocations. As they did above with regard to the 2110-2130 MHz band, BNSF and NS suggest that the voluntary negotiation period for relocation negotiations regarding the 2165-2200 MHz band should begin on the grant date of MSS authorizations for use of that band, rather than on the acceptance date of MSS applications. Likewise, BNSF and NS also suggest that any "sunset date" for the MSS operators

obligation to compensate BAS and FS incumbents for relocation from the 2165-2200 MHZ band should be tied to the expiration date of initial MSS licenses.

Sharing. The FNPRM encourages the sharing of the 2165-2200 MHZ band between MSS and FS licensees. Although BNSF and NS are skeptical that sharing is technically feasible, they will endeavor in good faith to develop and effectuate appropriate sharing plans. However, BNSF and NS, like other critical infrastructure industries, cannot compromise their significant and compelling safety factors which require constant and instantaneous access to RF capacity. Accordingly, any sharing scheme which relies upon even momentary delays in access to capacity cannot be considered to be feasible.

Paired Frequencies. The FNPRM notes that the 2130-2150 MHz band, while not directly affected by the MSS allocation, is paired with the 2180-2200 MHz band to provide FS links. The FNPRM proposes to allow FS incumbents and MSS operators to address 2130-2150 MHz relocations in the context of 2180-2200 MHz relocation negotiations. With regard to involuntary relocation, however, the FNPRM questions (i) whether an involuntary relocation from the 2180-2200 MHz band should require an accompanying relocation of the paired 2130-2150 MHz link, and (ii) whether the responsibility for demonstrating the need for concurrent involuntary relocation of paired 2130-2150 MHz paired channels should rest on the FS incumbent.

BNSF and NS suggest that the accepted relocation standard

of comparable or equivalent facilities and equipment compels giving the FS incumbent the ability to insist on new paired frequencies in the same spectrum range. To allow MSS operators to impose upon FS incumbents of maintaining both 2 GHz and above 5 GHz equipment in a single system would be to permit the MSS operators to also impose less than equivalent facilities on the FS incumbents.

Respectfully submitted,

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